

forschende Gesellschaft at Bamberg (Baijern), dated December 21, 1860, expressing a desire to extend the range of their exchanges, and to include therein the publications of the American Philosophical Society. Inclosed was received a letter from Felix Flügel, dated Leipsig, January 19, 1861, informing the Society that he had transferred his copies of its Proceedings to the Bamberg Natural History Society.

Donations for the Library were received from the Academies at Vienna, Stockholm, Boston, and Philadelphia; the Royal Danish, the Royal, Royal Astronomical, Royal Geographical, and Geological Societies, Society of Arts and Royal Institution, at London, the Essex and Franklin Institutes, the Boston Society of Natural History, the Bureau des Ponts at Paris, the Radcliffe Trustees, the National Observatory at Washington, the Editors of the American Journal and Medical News and Library, Dr. W. Whewell of Cambridge, England, and Major Bache, U. S. T. Engineers.

On motion of Dr. Bache, the Physico-Economical Society of Königsberg, in Prussia, was ordered to be placed on the list of corresponding Societies, at the discretion of the Secretaries.

On motion of Professor Cresson, the Natural History Society at Bamberg, in Bavaria, was ordered to be placed on the list of corresponding Societies, at the discretion of the Secretaries.

And the Society was adjourned.

*Stated Meeting, May 17, 1861.*

Present, thirteen members.

Professor CRESSON, Vice-President, in the Chair.

Donations for the Library were received from the Bamberg and Königsberg Societies, the Swedish Academy, London

Chemical Society, the Franklin and Wilmington Institutes, the Editor of the Rural Economist, the Minister of Public Instruction at Santiago de Chili, and Mr. George Ord.

Mr. Lesley described the super-anticlinal situations of the more violent oil-springs of the West, on the authority of General Pomeroy, and stated that it is a law of our principal carboniferous synclinal troughs to have at least one subordinate commonly excentric anticlinal in its floor, dividing it longitudinally into at least two troughs, in each of which the salt water collects. The principal collection of oil and gas, on the contrary, takes place at the crest of the intermediate anticlinal, and the most violent explosions of gas issue from borings along this axis. Professor Cresson illustrated the structural law thus stated, by referring to the report of Professor Faraday to the British Government on the explosions of coal-gas in the English mines. These are particularly dangerous in the vicinity of "inverted troughs," or anticlinals, in the upper part of which the gas collects. Any unusual fall of the barometer is of course the signal for a copious downflow of fire-damp from these reservoirs, the pressure which keeps it there being for the time taken off. The same pneumatic law propagates originally slight or moderate explosions to great distances along the workings. The first explosion, with its corollary vacuum, sets free a volume of gas involved in the goaf or gob of the neighborhood; this, when exploded in its turn, sets free fresh volumes of gas still farther on.

Professor Cresson, alluding to the fact that much of the reflected light we see is polarised, whence the glare and difficulty experienced regarding pictures and objects under glass, described an application of the Nichols prism to the opera glass, made by Dr. Charles M. Cresson, by which the difficulty is successfully encountered, and objects can be read under glass obliquely as plainly as when uncovered.

The Society was then adjourned.